

SpolIJ MLLKRRIGLLLSMVGVFMLLAG**CS**SVKEPI TADSPHFWDKYVYVPLSELITYVAKLTGDN-----**63**
YqjG ML-KTYQKLLAM---GIFLIIVL**CS**GNAAFAATNQVGGLSNVGFFHDYLIIEPFSALLKGVAGLFHGE**65**

SpolIJ YGLSIIILV**T**ILIRLLIL**PL**MIKQLRSS---KAMQALQPEMQKLKEKYSS-KDQKTQQKLQQETMA**121**
YqjG YGLSIIILV**T**IIIV**PL**FVNQFKKQRI**FQ**EKMAVIKPQVDSIQVKLKKTK**DP**EKQKELQMEMMK**128**
YidC WGF**S**IIII**T**FIVRGIMY**PL**T**KA**QY**TS**M---AKMRMLQPKIQAMRERL--GDD--KQRISQEMMA**410**
Oxa1p WWGT**IA**AT**T**ILIRCLMF**PL**YVKSSDTV---ARNSHIKPELDALNNKLMST**DL**QQGQLVAMQRKK**189**

SpolIJ LFQKHGVNP--LAG-CFPIL**I**QMPILIGFYHAIMRTQAISEH--SFLWFD**L**GEK**D**PYYI**L**P--IVA**182**
YqjG LYQEHNNIP--LAMGCLPML**I**QSPIMIGLYYAIRSTPEIA**SH**--SFLWFS**L**GQ**S****D**IIIM**S**L**S**AGIMY**190**
YidC LYKAEKVNP--LGG-CFPLL**I**QMPIFLALYYMLMG**S**VELRQAPFALWIHD**L**SAQ**D**PYYI**L**P--ILM**473**
Oxa1p LLSSHG**I**KNR**W**LAAPMLQIP**I**ALGFFNALRHMANYPVDGFANQGVAF**TD**L**T**Q**AD**PYLG**L**QVITAA**255**

SpolIJ GVA**T**FVQ**Q**KLMMAGNAQ**Q**NP-----QMAMMLWIM**P**IMIIVFAIN**F**PAAL**S**LYWVVGNLFMIA**Q**TF**L****241**
YqjG FVQAYIAQKLSAKYSAVPQNPA**Q**SAKLLMVFI**F**PVMM**T**IFSLN**V**PAAL**P**LYWFTSGLFLTV**Q**NI**V****256**
YidC GVTMFF**I**QKMSPT--TVTDP-----MQQKIM**T**FM**P**VIFTVFFLW**E**PSGLVLYYIVSNLVT**II**Q**Q**Q**L****532**
Oxa1p VFIS**F**TRLGGETGAQ**Q**FS**S**P-----MKR**L**FTIL**P**IIISIPATMN**L**SSAVVLYFAFN**G**AFSV**L**Q**T**MI**315**

SpolIJ IKGPDIKKNPEPQKAGGKKK**261**
YqjG LQMT**H**HKSKKTAAL**T**ESV-K**275**

FIG._1A

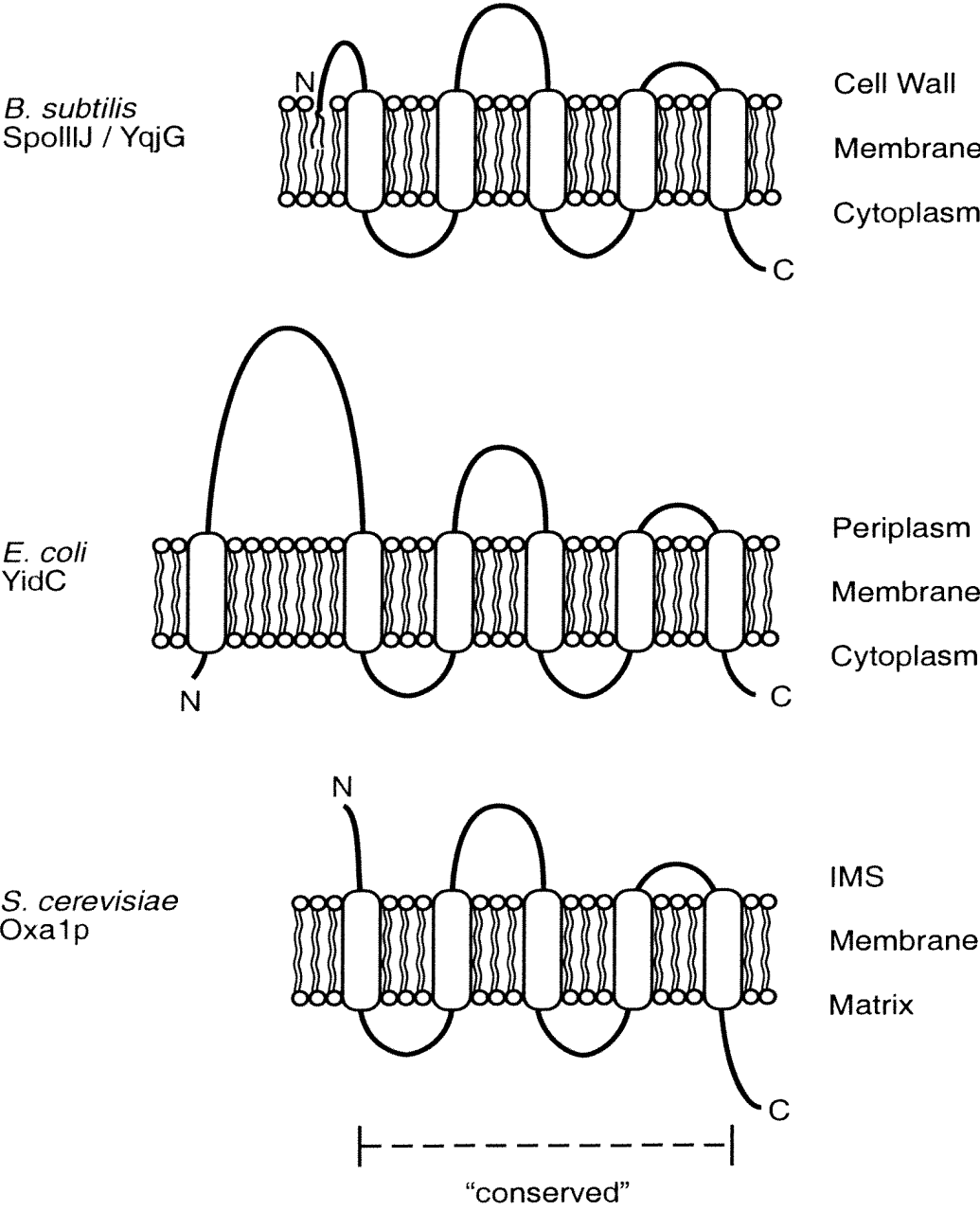
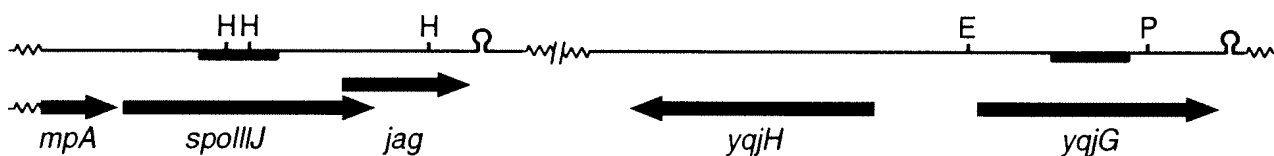
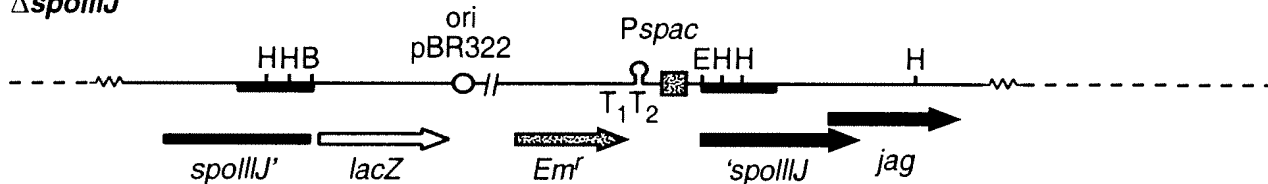


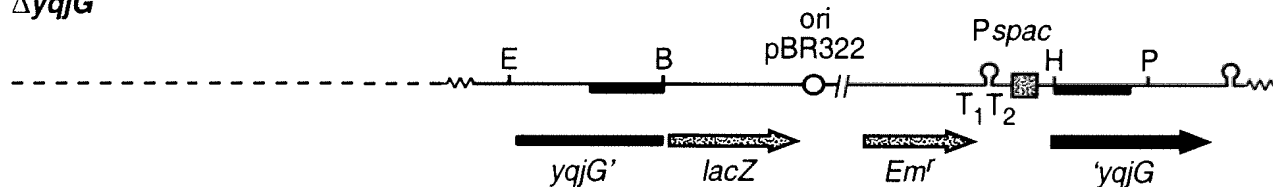
FIG._1B

***B. subtilis* 168**

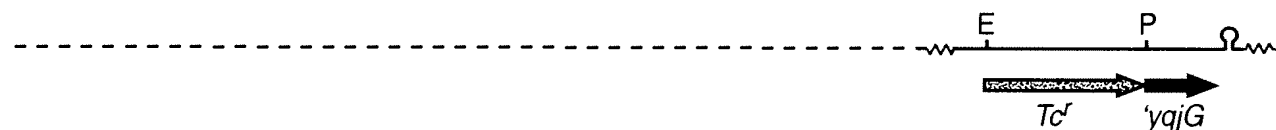
↓ Sco integration of pMutin- Δ *spoIIJ*

B. subtilis* Δ *spoIIJ

Sco integration of pMutin- Δ *yqjG* ↓

B. subtilis* Δ *yqjG

Dco replacement of *EcoRI*-*PstI* fragment by a *Tc^r* marker ↓

B. subtilis* Δ *yqjG-Tc

↓ Sco integration of pMutin-*IspoIIJ*

Dco replacement of *EcoRI*-*PstI* fragment by a *Tc^r* marker ↓

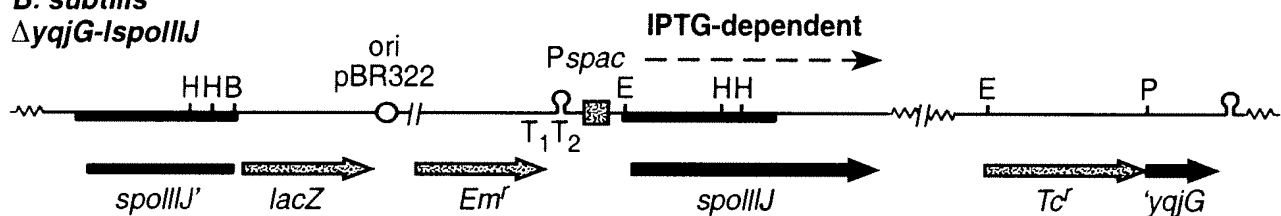
B. subtilis* Δ *yqjG-IspoIIJ**FIG. 2**

FIG._3A

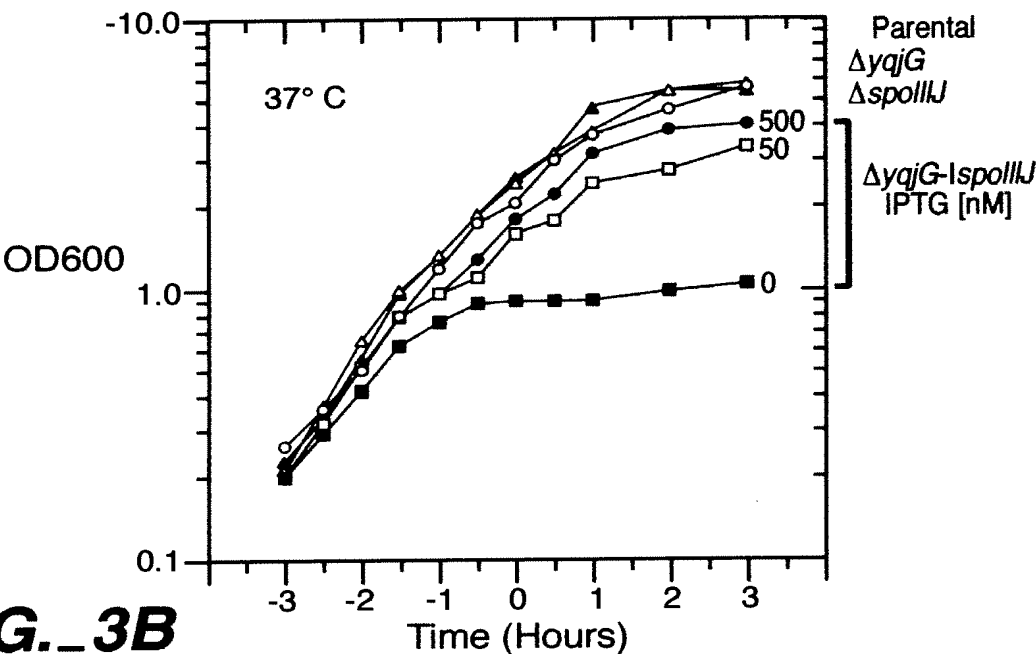
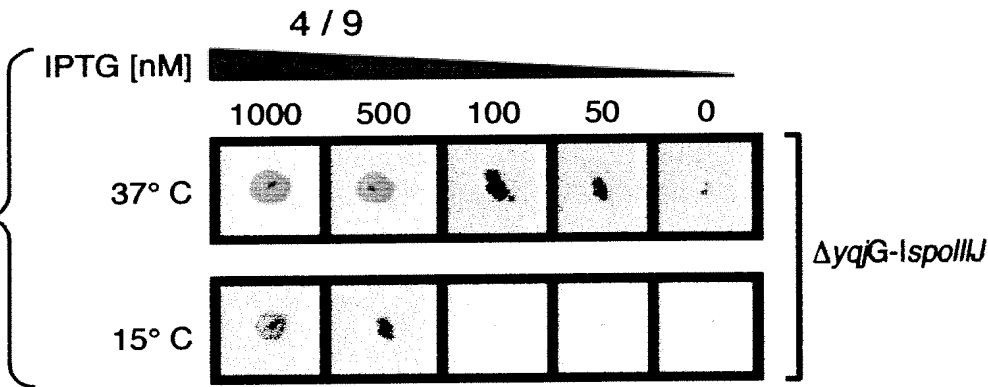


FIG._3B

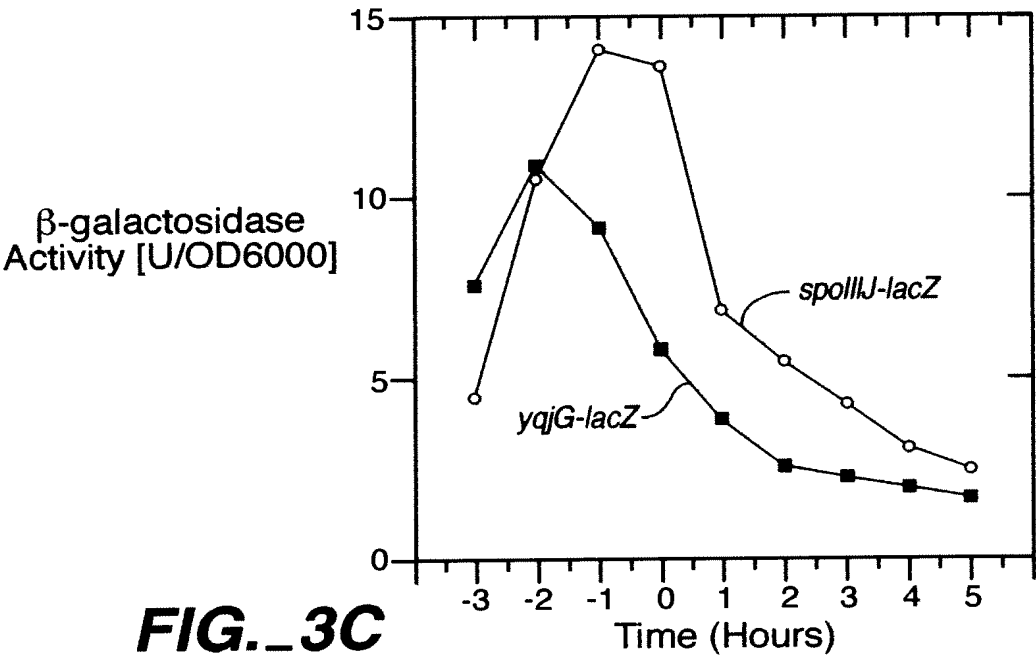
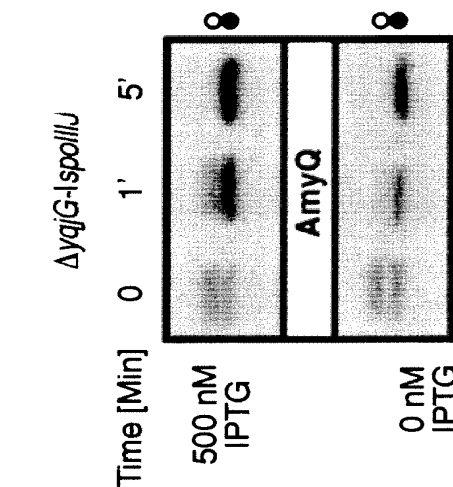
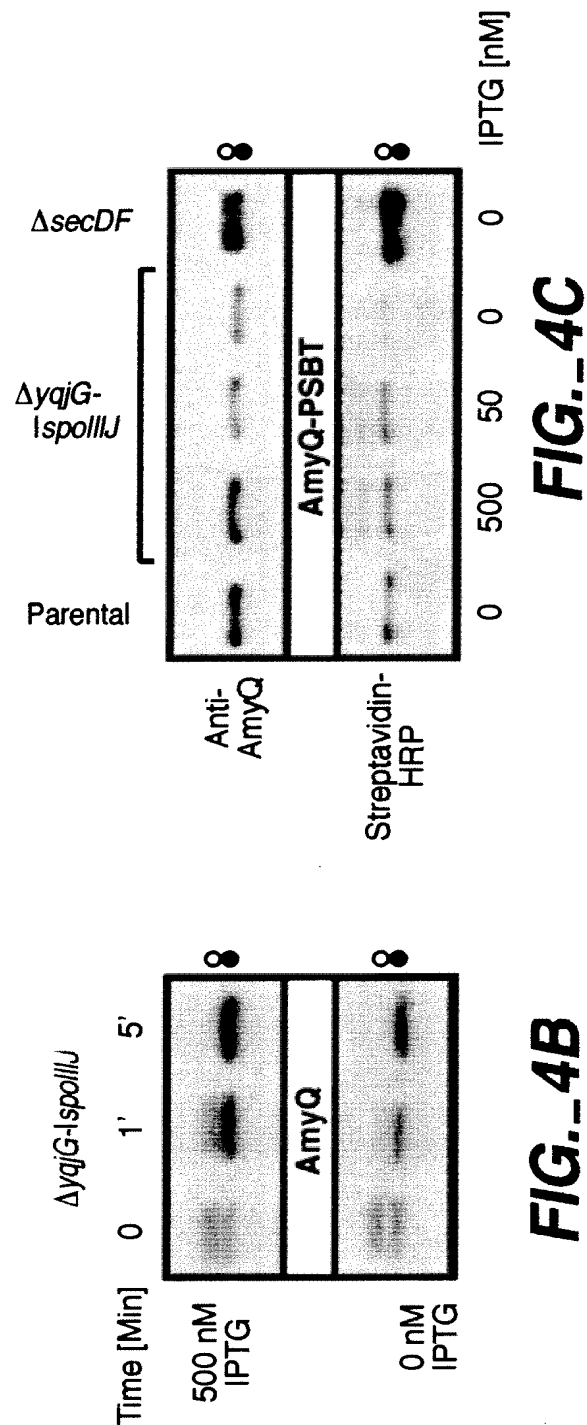
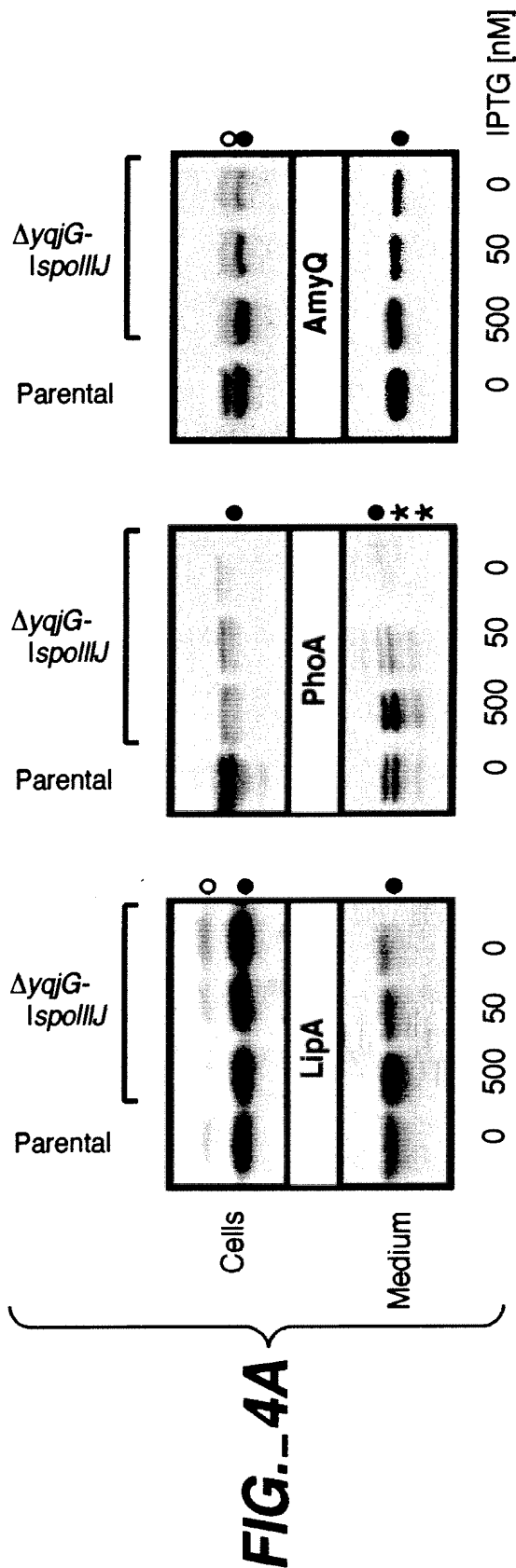
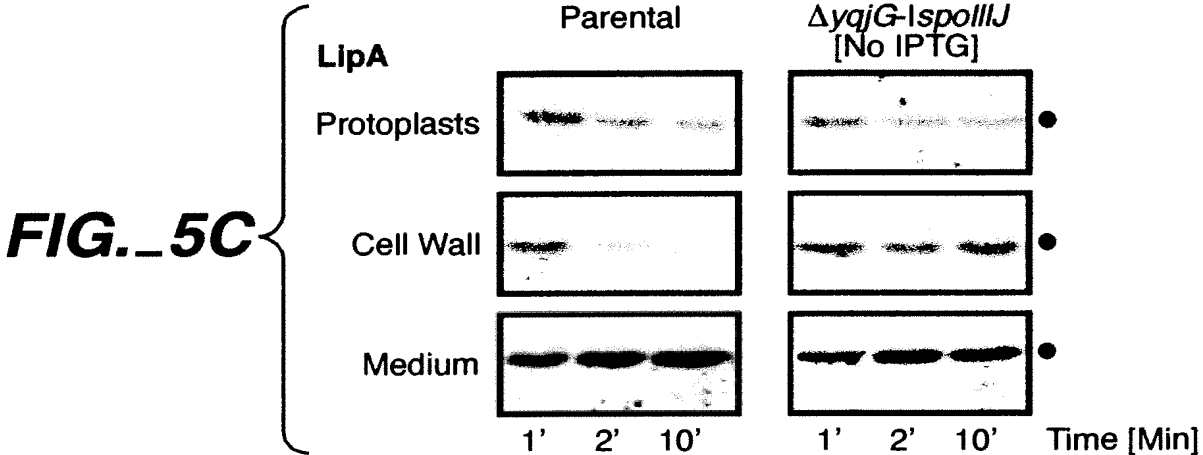
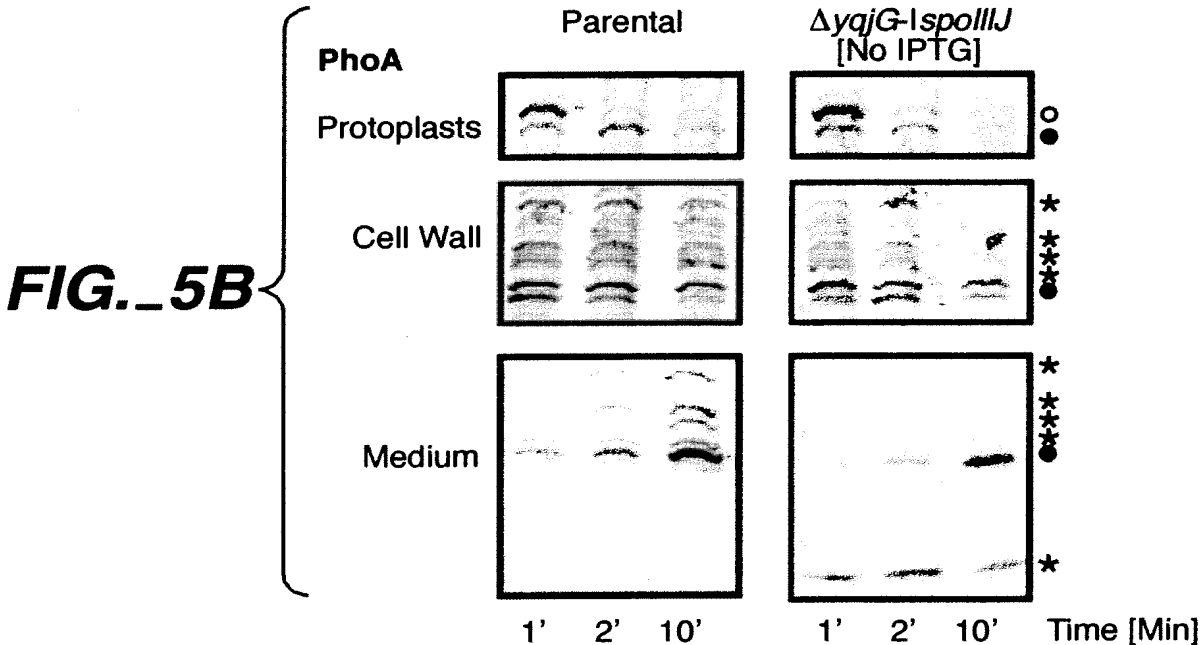
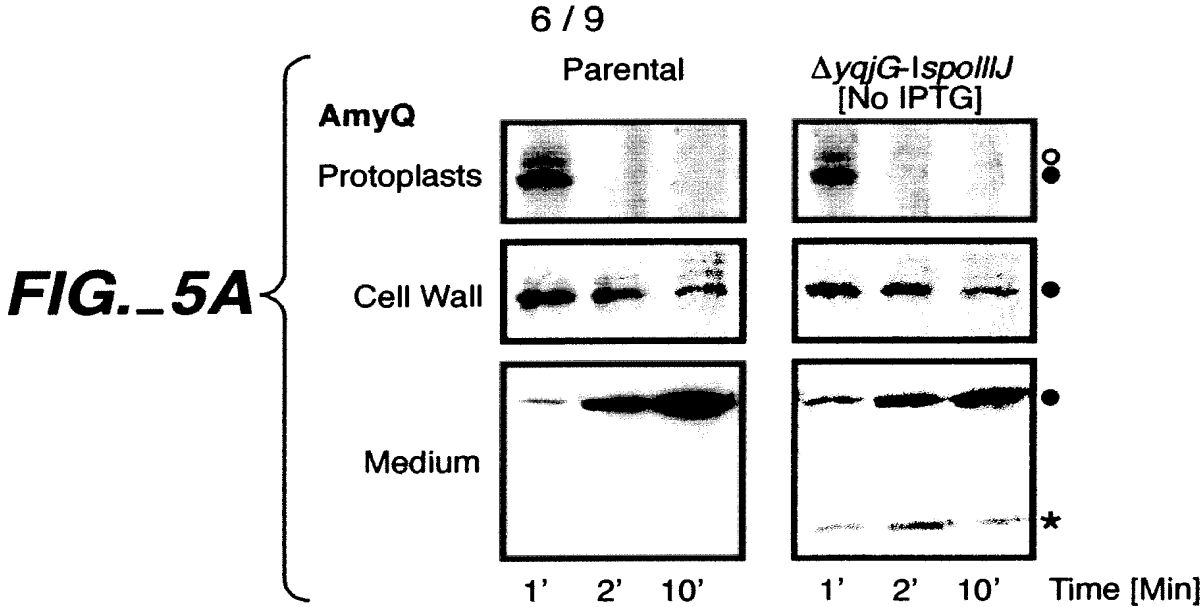


FIG._3C





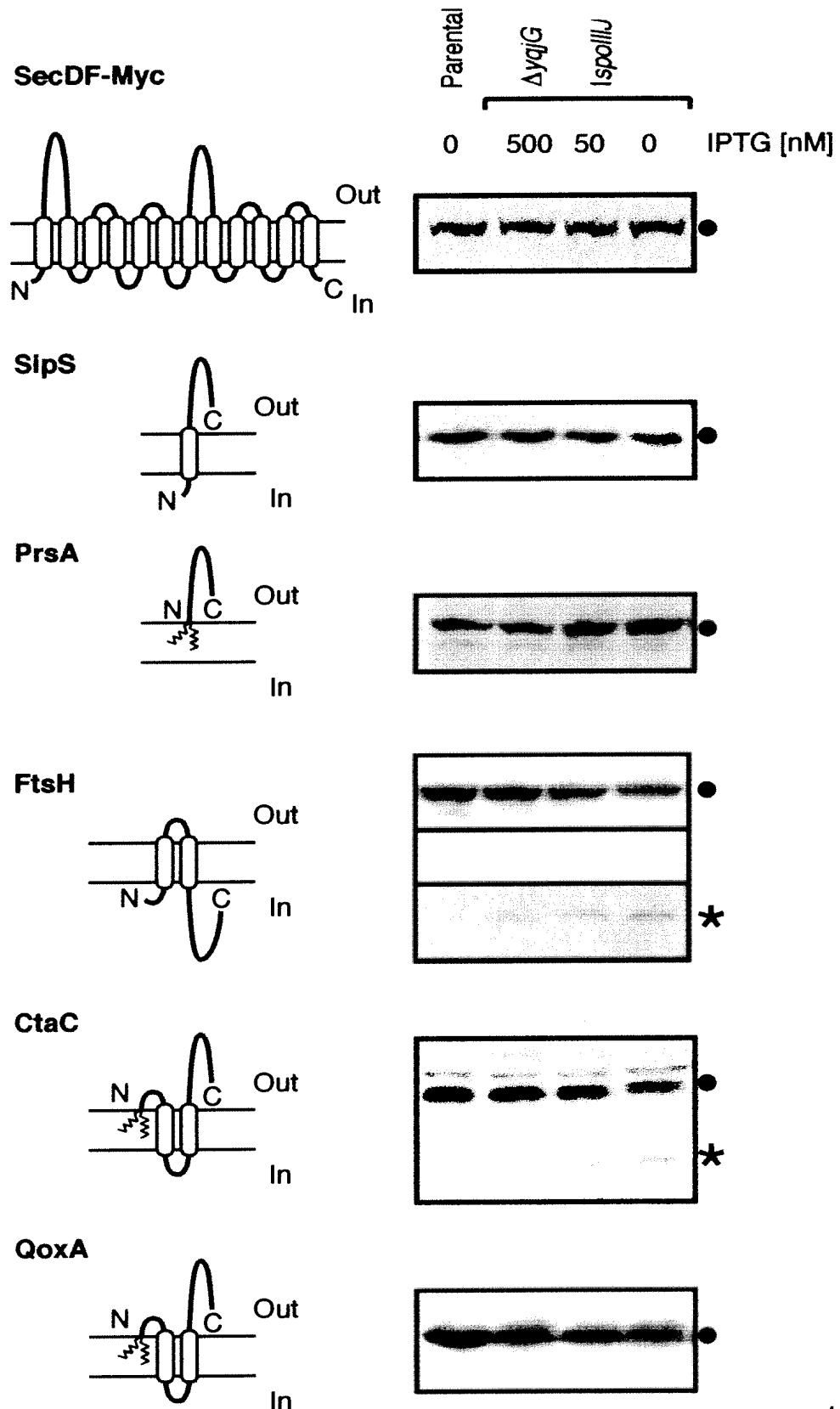


FIG. 6

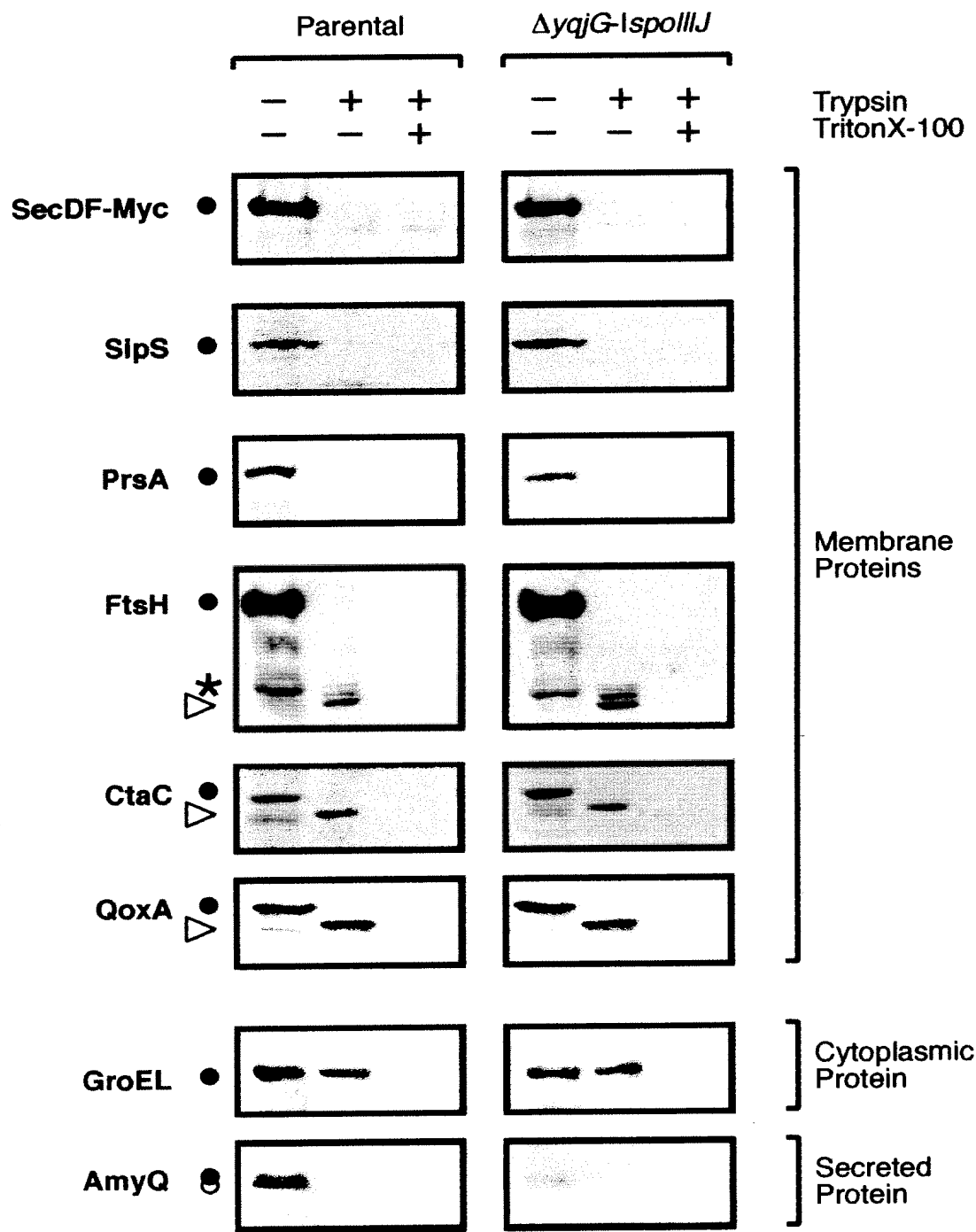
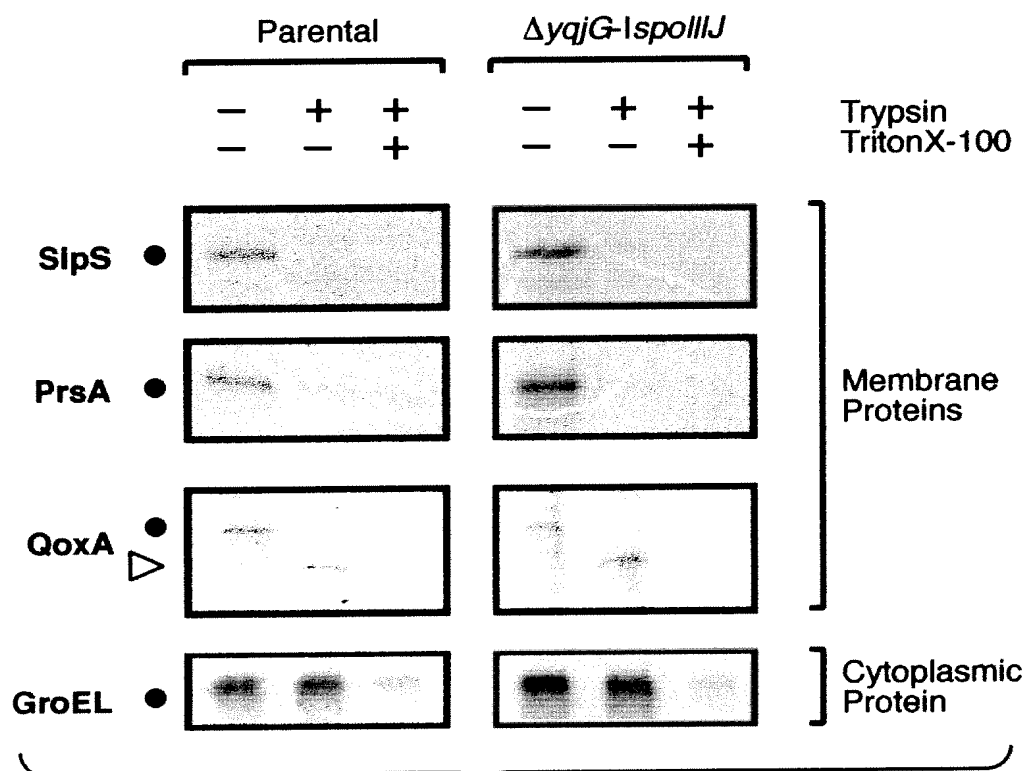


FIG. 7

**FIG._8**